

OBSERVATIONS & RECOMMENDATIONS

After reviewing data collected from **HIGHLAND LAKE, ANDOVER** the program coordinators recommend the following actions.

FIGURE INTERPRETATION

- Figure 1: These graphs illustrate concentrations of chlorophyll-a in the water column. Algae are microscopic plants that are a natural part of lake ecosystems. Algae contain chlorophyll-a, a pigment necessary for photosynthesis. A measure of chlorophyll-a can indicate the abundance of algae in a lake. The historical data (the bottom graph) show a *stable* in-lake chlorophyll-a trend since 1992. Algal abundance was uniform throughout the season, and diatoms and golden-brown algae were dominant in June. While algae are present in all lakes, an excess amount of any type is not welcomed. Concentrations can increase when there are external and internal sources of phosphorus, which is the nutrient algae depend upon for growth. It's important to continue the education process and keep residents aware of the sources of phosphorus and how it influences lake quality.
- Figure 2: Water clarity is measured by using a Secchi disk. Clarity, or transparency, can be influenced by such things as algae, sediments from erosion, and natural colors of the water. The graphs on this page show historical and current year data. The lower graph shows a *stable* trend in lake transparency. Transparency decreased slightly this season, but mean values remain above the NH average. The 2000 sampling season was considered to be wet and, therefore, average transparency readings are expected to be slightly lower than last year's readings. Higher amounts of rainfall usually cause more eroding of sediments into the lake and streams, thus decreasing clarity.
- Figure 3: These figures show the amounts of phosphorus in the epilimnion (the upper layer in the lake) and the hypolimnion (the lower layer); the inset graphs show current year data. Phosphorus is the limiting nutrient for plants and algae in New Hampshire waters. Too much phosphorus in a lake can lead to increases in plant growth over time. These graphs show a *slightly improving* trend for the upper water layer, and a *stable* trend for the lower water layer. Hypolimnetic phosphorus concentrations were high in September and

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most likely due to the turbidity of the sample. Sample contamination with bottom sediment can raise the phosphorus concentration of the sample and yield inaccurate results. Overall, mean phosphorus concentrations for the epilimnion and hypolimnion have remained below the NH median for over 10 years! One of the most important approaches to reducing phosphorus levels is educating the public. Humans introduce phosphorus to lakes by several means: fertilizing lawns, septic system failures, and detergents containing phosphates are just a few. Keeping the public aware of ways to reduce the input of phosphorus to lakes means less productivity in the lake. Contact the VLAP coordinator for tips on educating your lake residents or for ideas on testing your watershed for phosphorus inputs.

OTHER COMMENTS

- **Please note** on the 4th of June this summer phosphorus levels were found to be less than 5 µg/L in the epilimnion (upper water layer), hypolimnion (lower water layer), Lower Maple St. Bk., and Tilton Bk. Also, on the 22nd of June phosphorus levels were less than 5 µg/L for the epilimnion. The NHDES Laboratory Services adopted a new method of analyzing total phosphorus this year and the lowest value that can be recorded is 'less than 5 µg/L'. If this caused an increase in the average phosphorus for either of the layers we would like to remind the association that a reading of 5 µg/L is still considered low for New Hampshire's waters.
- Conductivity and phosphorus in the West Inlet decreased to normal levels this season (Table 6). The increased rainfall helped to flush the inlet out and keep flow at a level where clean samples could be obtained. This in turn helped to decrease the conductivity and phosphorus concentrations from the elevated values seen last summer.
- Overall, conductivity was slightly decreased throughout the watershed this season. The largest reduction in conductivity was observed in the West Inlet. Conductivity increases often indicate the influence of human activities on surface waters. This decrease is a positive sign for Highland Lake. Septic system leachate, agricultural runoff, iron deposits, and road runoff can each influence conductivity readings.

NOTES

- Monitor's Note (6/4/00): No sample on West Inlet.
- Monitor's Note (9/10/00): Maple St. Inlet no flow.

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USEFUL RESOURCES

Stormwater Management and Erosion and Sediment Control Handbook. NHDES, Rockingham County Conservation District, USDA Natural Resource Conservation Service, 1992. (603) 679-2790.

Lake Protection Tips: Some Do's and Don'ts for Maintaining Healthy Lakes, WD-BB-9, NHDES Fact Sheet, (603) 271-3503 or www.state.nh.us

Comprehensive Shoreland Protection Act, RSA 483-B, WD-BB-35, NHDES Fact Sheet. (603) 271-3503 or www.state.nh.us

Answers to Common Lake Questions, NHDES-WSPCD-92-12, NHDES Booklet, (603) 271-3503.

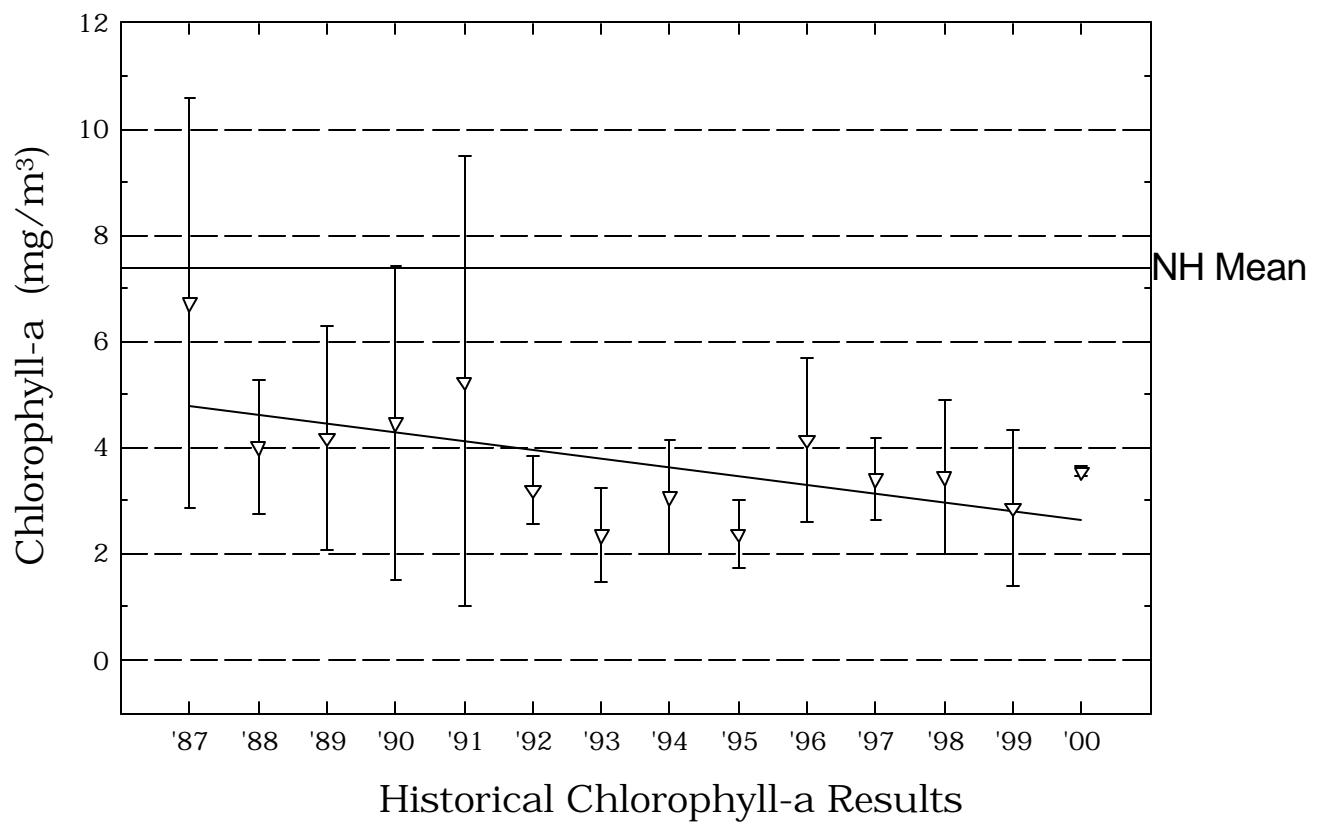
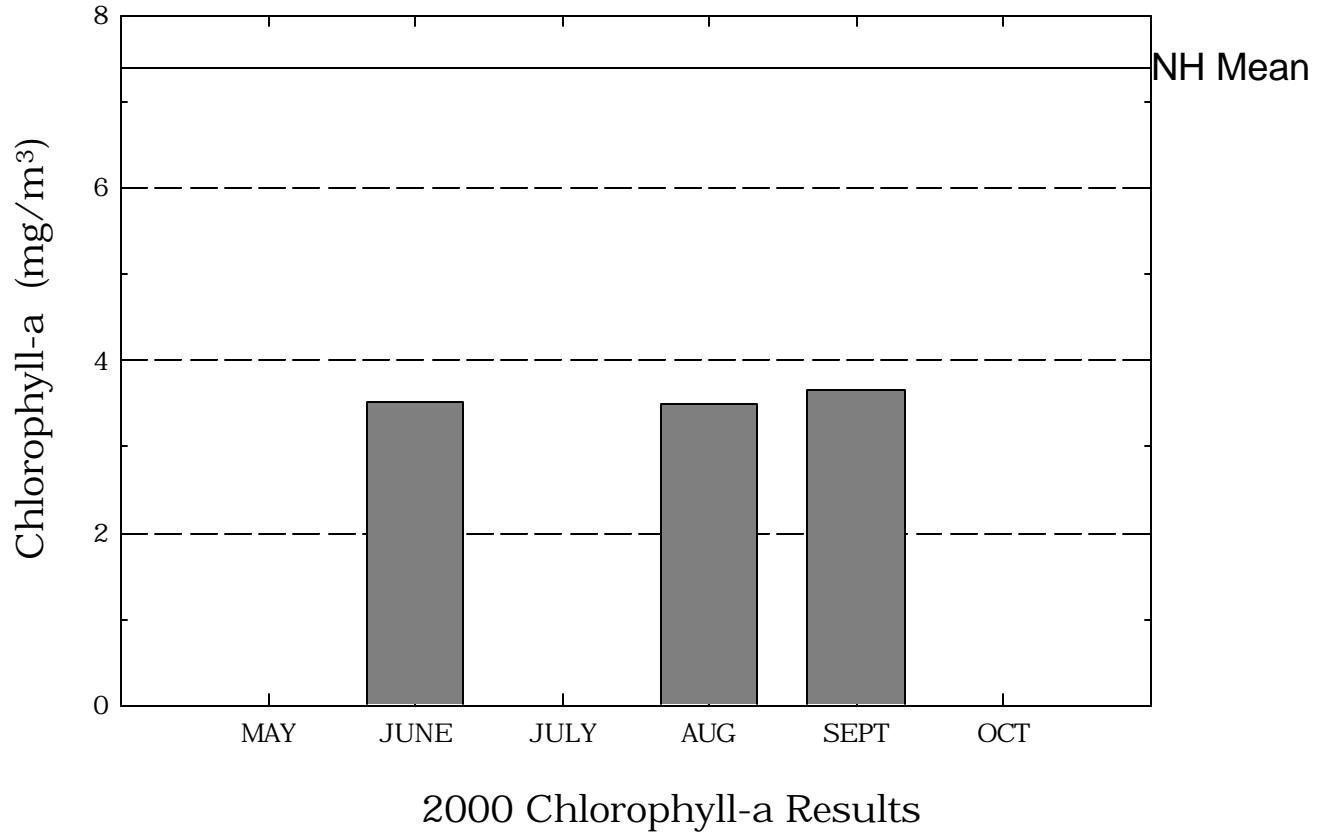
Handle With Care: Your Guide to Preventing Water Pollution. Terrene Institute, 1991. (800) 726-5253, or www.terrene.org

The Watershed Guide to Cleaner Rivers, Lakes, and Streams, Connecticut River Joint Commissions, 1995. (603) 826-4800

Through the Looking Glass: A Field Guide to Aquatic Plants. North American Lake Management Society, 1988. (608) 233-2836 or www.nalms.org

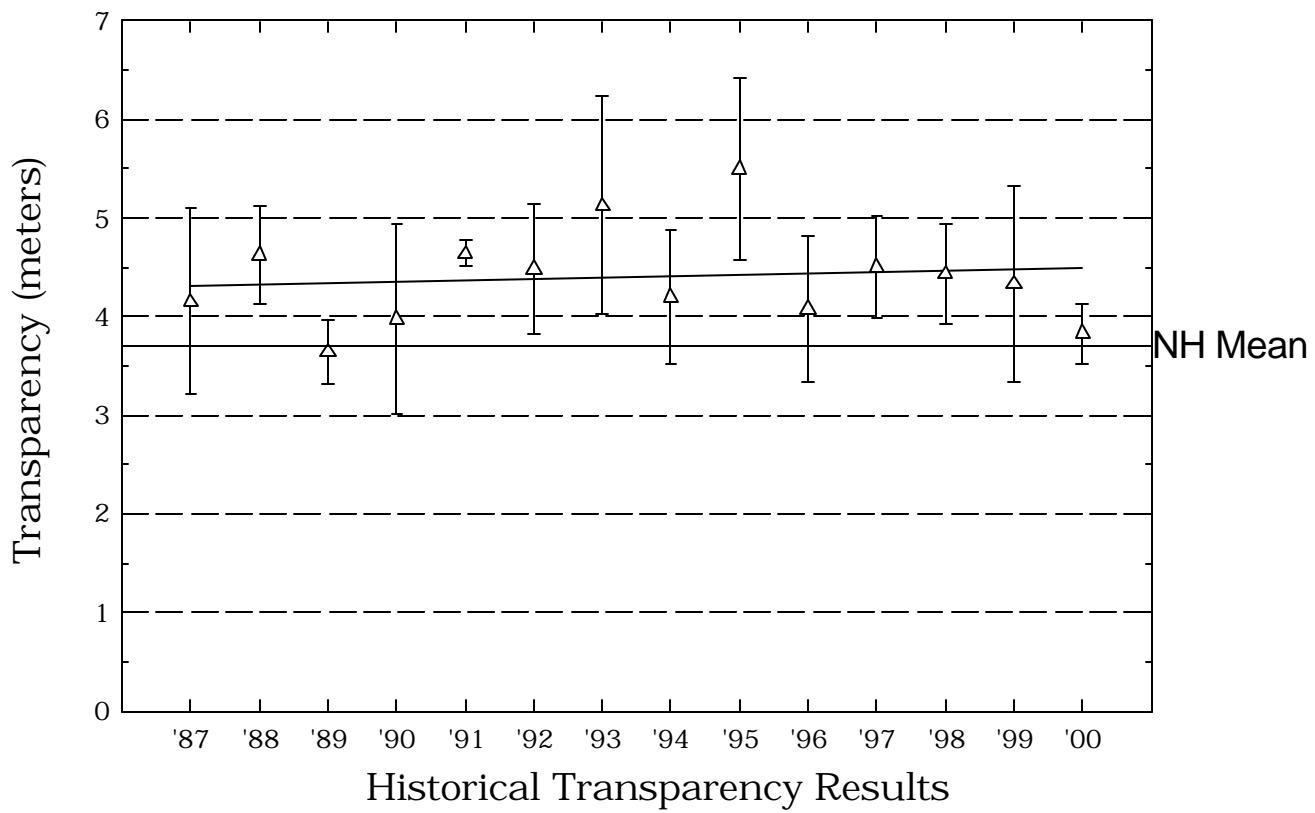
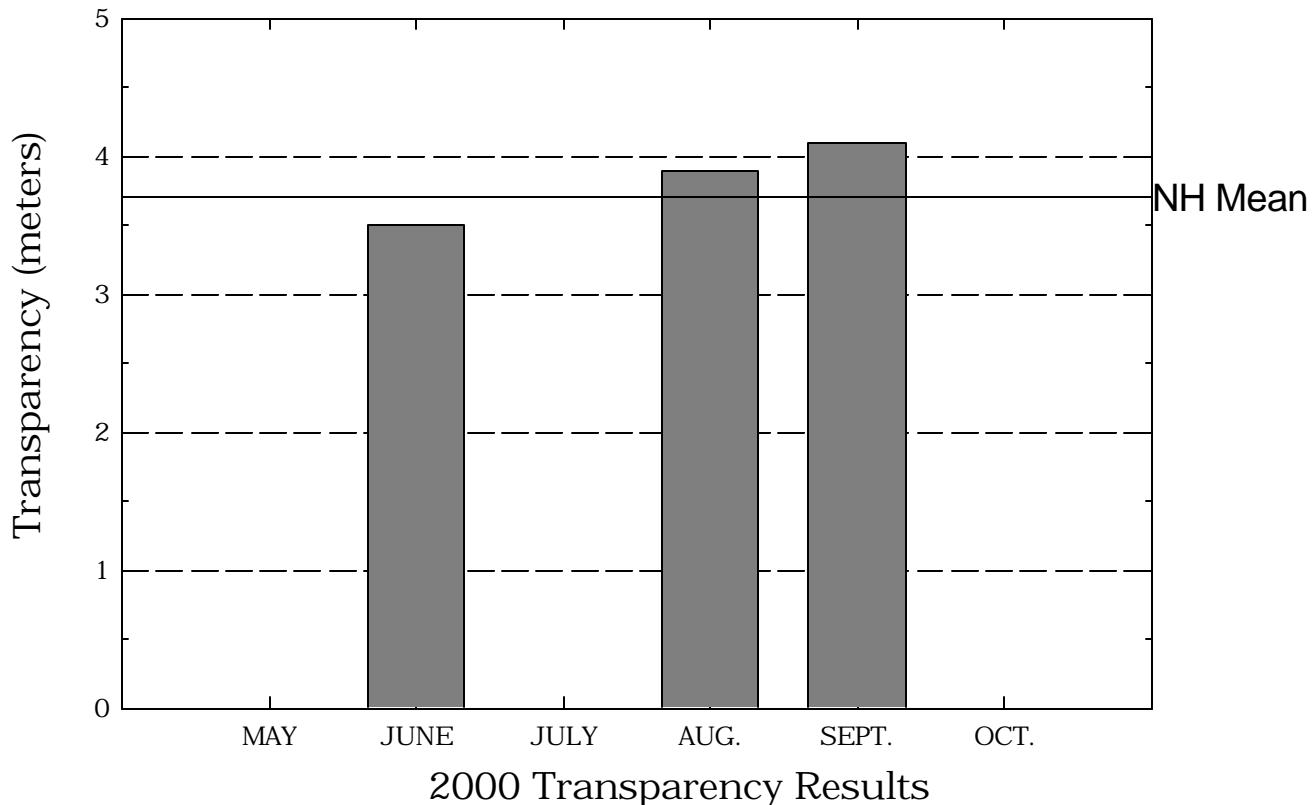
Highland Lake, Andover

Figure 1. Monthly and Historical Chlorophyll-a Results



Highland Lake, Andover

Figure 2. Monthly and Historical Transparency Results



Highland Lake, Andover

Figure 3. Monthly and Historical Total Phosphorus Data.

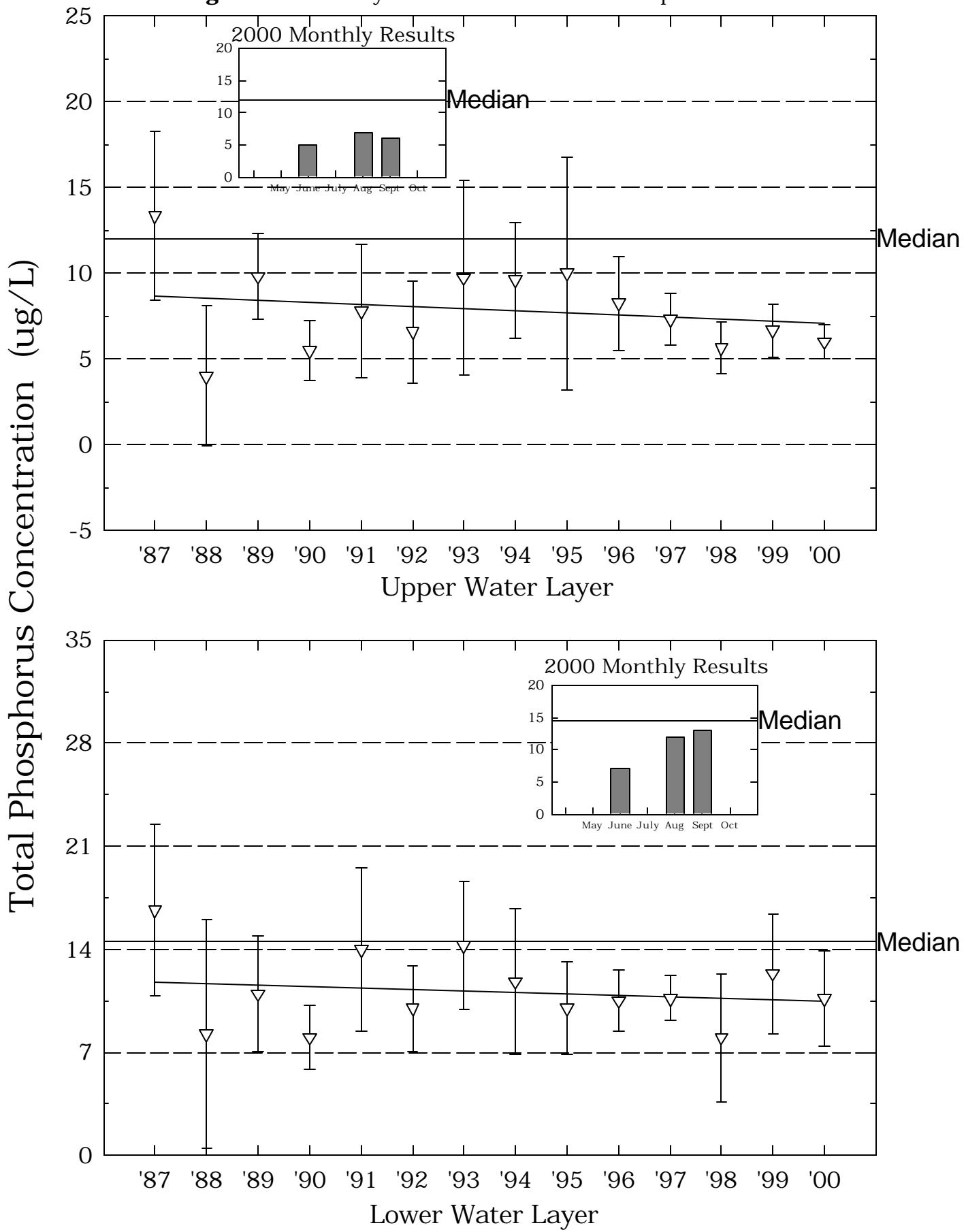


Table 1.

**HIGHLAND LAKE
ANDOVER**

Chlorophyll-a results (mg/m³) for current year and historical sampling periods.

Year	Minimum	Maximum	Mean
1987	3.75	11.11	6.72
1988	2.85	5.34	4.01
1989	2.37	7.35	4.18
1990	2.54	7.89	4.50
1991	1.50	12.28	5.25
1992	2.56	4.20	3.20
1993	1.78	3.65	2.35
1994	1.83	4.74	3.25
1995	1.85	3.29	2.37
1996	2.94	6.26	4.15
1997	2.73	4.24	3.41
1998	2.09	4.96	3.44
1999	2.02	4.58	2.87
2000	3.29	3.65	3.48

Table 2.

HIGHLAND LAKE
ANDOVER

Phytoplankton species and relative percent abundance.
Summary for current and historical sampling seasons.

Date of Sample	Species Observed	Relative % Abundance
08/11/1987	DINOBRYON TABELLARIA SYNURA	18 17 14
05/27/1988	ASTERIONELLA DINOBRYON	52 41
05/25/1989	RHIZOSOLENIA	90
06/21/1989	RHIZOSOLENIA CHrysosphaerella	43 39
05/23/1990	DINOBRYON ASTERIONELLA	23 75
07/23/1991	CERATIUM CHrysosphaerella	25 10
05/21/1992	CHrysosphaerella ASTERIONELLA COELOSPHAERIUM	52 13 8
06/15/1993	RHIZOSOLENIA ASTERIONELLA	53 18
06/15/1994	RHIZOSOLENIA DINOBRYON SYNURA	39 15 35
07/22/1994	ASTERIONELLA	80
05/18/1995	DINOBRYON ASTERIONELLA MELOSIRA	94 7 2

Table 2.

**HIGHLAND LAKE
ANDOVER**

**Phytoplankton species and relative percent abundance.
Summary for current and historical sampling seasons.**

Date of Sample	Species Observed	Relative % Abundance
06/11/1996	DINOBRYON	54
	ASTERIONELLA	38
	MALLOMONAS	4
06/11/1997	ASTERIONELLA	52
	DINOBRYON	51
	RHIZOSOLENIA	6
06/11/1998	MELOSIRA	34
	DINOBRYON	33
	ASTERIONELLA	12
06/14/1999	ASTERIONELLA	33
	MELOSIRA	20
	RHIZOSOLENIA	14
06/22/2000	DINOBRYON	31
	ASTERIONELLA	25
	ARTHRODESMUS	13

Table 3.

**HIGHLAND LAKE
ANDOVER**

**Summary of current and historical Secchi Disk
transparency results (in meters).**

Year	Minimum	Maximum	Mean
1987	3.5	5.5	4.1
1988	4.0	5.2	4.6
1989	3.4	4.2	3.6
1990	3.0	5.3	3.8
1991	4.5	4.8	4.6
1992	3.8	5.5	4.4
1993	3.8	6.5	5.1
1994	3.5	5.8	4.4
1995	4.8	6.8	5.5
1996	3.4	5.1	4.0
1997	3.9	4.8	4.5
1998	4.0	5.0	4.4
1999	3.3	5.3	4.3
2000	3.0	4.1	3.6

Table 4.

HIGHLAND LAKE
ANDOVER

pH summary for current and historical sampling seasons.
Values in units, listed by station and year.

Station	Year	Minimum	Maximum	Mean
CANAL SITE				
	1994	6.20	6.20	6.20
EAST SIDE CHANNEL				
	1988	6.56	6.56	6.56
EPILIMNION				
	1987	6.59	6.88	6.76
	1988	6.80	7.03	6.90
	1989	6.71	6.96	6.82
	1990	6.72	6.98	6.83
	1991	6.70	7.06	6.86
	1992	6.60	7.07	6.82
	1993	6.91	7.13	7.02
	1994	6.60	6.90	6.76
	1995	6.90	7.10	7.01
	1996	6.39	7.25	6.60
	1997	6.57	6.76	6.66
	1998	6.69	6.90	6.79
	1999	6.53	6.72	6.62
	2000	6.66	6.84	6.77
HYPOLIMNION				
	1987	6.27	6.59	6.36
	1988	6.14	6.56	6.31
	1989	6.01	6.38	6.13

Table 4.

HIGHLAND LAKE
ANDOVER

pH summary for current and historical sampling seasons.
Values in units, listed by station and year.

Station	Year	Minimum	Maximum	Mean
	1990	6.01	6.23	6.12
	1991	6.02	6.34	6.18
	1992	6.14	6.29	6.22
	1993	6.12	6.26	6.19
	1994	6.00	6.55	6.17
	1995	6.23	6.69	6.36
	1996	5.95	6.18	6.06
	1997	5.99	6.20	6.12
	1998	5.92	6.12	6.02
	1999	6.22	6.45	6.28
	2000	6.02	6.15	6.10

LOWER MAPLE ST BK

	1987	6.71	7.16	6.83
	1988	6.76	6.81	6.78
	1989	6.43	7.11	6.69
	1990	6.65	7.08	6.80
	1991	6.80	6.97	6.87
	1992	6.67	7.09	6.90
	1993	6.76	6.76	6.76
	1994	6.63	6.99	6.73
	1995	6.78	6.78	6.78
	1996	6.51	7.21	6.65
	1997	6.68	6.83	6.75
	1998	6.58	6.94	6.70
	1999	6.82	6.82	6.82
	2000	6.71	6.82	6.76

Table 4.

HIGHLAND LAKE
ANDOVER

pH summary for current and historical sampling seasons.
Values in units, listed by station and year.

Station	Year	Minimum	Maximum	Mean
METALIMNION				
	1987	6.45	6.68	6.55
	1988	6.68	6.86	6.73
	1989	6.35	6.80	6.57
	1990	6.34	6.84	6.64
	1991	6.10	7.09	6.61
	1992	6.56	6.81	6.66
	1993	6.68	7.26	6.89
	1994	6.55	6.87	6.70
	1995	6.82	7.01	6.93
	1996	6.22	6.69	6.38
	1997	6.79	7.00	6.87
	1998	6.10	6.30	6.22
	1999	6.46	6.63	6.53
	2000	6.01	6.65	6.34
NORTH SIDE CHANNEL				
	1988	6.53	6.53	6.53
OUTLET				
	1987	6.63	6.86	6.76
	1988	6.70	6.92	6.80
	1989	6.65	6.82	6.72
	1990	6.56	6.79	6.69
	1991	6.40	6.80	6.63
	1992	6.72	6.86	6.79

Table 4.

HIGHLAND LAKE
ANDOVER

pH summary for current and historical sampling seasons.
Values in units, listed by station and year.

Station	Year	Minimum	Maximum	Mean
	1993	6.75	6.89	6.81
	1994	6.66	6.90	6.77
	1995	6.70	6.89	6.82
	1996	6.53	6.92	6.65
	1997	6.63	6.74	6.68
	1998	6.56	6.67	6.62
	1999	6.62	6.77	6.66
	2000	6.64	6.72	6.67
SW RT. 11 BROOK				
	1989	6.12	6.12	6.12
	1990	6.18	6.32	6.25
	1991	5.90	6.44	6.17
	1992	6.34	6.52	6.42
TILTON BK				
	1987	6.58	6.96	6.70
	1988	6.64	6.77	6.73
	1989	6.44	6.91	6.61
	1990	6.42	6.91	6.68
	1991	6.60	7.07	6.81
	1992	6.68	7.15	6.86
	1993	6.79	7.18	7.00
	1994	6.52	6.85	6.66
	1995	6.54	7.10	6.79
	1996	6.25	7.09	6.51
	1997	6.63	6.97	6.78

Table 4.

HIGHLAND LAKE
ANDOVER

pH summary for current and historical sampling seasons.
Values in units, listed by station and year.

Station	Year	Minimum	Maximum	Mean
	1998	6.41	6.89	6.59
	1999	6.72	6.85	6.77
	2000	6.62	6.82	6.70
WEST INLET				
	1987	6.05	6.31	6.19
	1988	5.97	6.31	6.13
	1989	5.96	6.20	6.08
	1990	6.42	6.42	6.42
	1991	6.08	6.08	6.08
	1992	6.29	6.33	6.31
	1993	6.43	6.46	6.44
	1994	6.09	6.22	6.17
	1995	6.34	6.34	6.34
	1996	6.14	6.19	6.16
	1997	6.41	6.42	6.41
	1998	6.21	6.27	6.24
	1999	6.45	6.45	6.45
	2000	6.35	6.54	6.41

Table 5.

HIGHLAND LAKE
ANDOVER

Summary of current and historical Acid Neutralizing Capacity.
Values expressed in mg/L as CaCO .

Epilimnetic Values

Year	Minimum	Maximum	Mean
1987	5.50	5.80	5.65
1988	5.70	6.30	6.00
1989	5.10	6.20	5.68
1990	4.70	5.40	5.02
1991	4.40	5.70	5.00
1992	3.60	6.20	5.04
1993	4.40	6.10	5.18
1994	4.30	6.80	5.67
1995	5.40	7.40	6.70
1996	4.70	5.20	4.93
1997	4.00	4.70	4.43
1998	5.40	7.00	5.93
1999	4.10	5.70	4.80
2000	5.00	6.00	5.38

Table 6.

HIGHLAND LAKE
ANDOVER

**Specific conductance results from current and historic
sampling seasons. Results in uMhos/cm.**

Station	Year	Minimum	Maximum	Mean
EAST SIDE CHANNEL				
	1988	106.1	106.1	106.1
EPILIMNION				
	1987	39.3	39.4	39.4
	1988	36.7	39.1	37.7
	1989	37.3	41.0	38.8
	1990	35.4	39.5	37.6
	1991	35.8	39.9	38.1
	1992	39.3	42.1	40.8
	1993	39.4	42.7	41.2
	1994	38.7	43.8	41.4
	1995	38.9	43.0	41.3
	1996	37.7	38.7	38.0
	1997	34.7	37.5	36.2
	1998	36.4	38.2	37.5
	1999	42.3	43.9	43.3
	2000	39.9	43.0	41.3
HYPOLIMNION				
	1987	39.7	48.5	45.1
	1988	37.3	40.2	38.2
	1989	40.1	46.1	42.3
	1990	34.9	41.8	38.9
	1991	35.1	40.4	37.7
	1992	39.6	47.5	42.1

Table 6.**HIGHLAND LAKE****ANDOVER**

**Specific conductance results from current and historic
sampling seasons. Results in uMhos/cm.**

Station	Year	Minimum	Maximum	Mean
	1993	40.4	43.0	41.4
	1994	39.4	62.0	45.8
	1995	37.9	44.3	41.9
	1996	38.4	43.4	40.1
	1997	34.8	37.1	35.8
	1998	39.0	41.2	40.2
	1999	42.5	55.9	48.0
	2000	40.5	45.6	43.3
LOWER MAPLE ST BK				
	1987	31.2	45.2	38.2
	1988	25.9	40.9	34.5
	1989	24.2	38.1	32.0
	1990	24.5	37.4	30.4
	1991	30.0	55.4	43.5
	1992	27.0	54.9	42.1
	1993	34.1	34.1	34.1
	1994	27.3	47.3	35.0
	1995	26.4	26.4	26.4
	1996	27.9	36.3	31.3
	1997	29.6	33.2	31.4
	1998	29.2	34.3	31.5
	1999	34.0	34.0	34.0
	2000	28.5	36.1	31.8

Table 6.

HIGHLAND LAKE
ANDOVER

**Specific conductance results from current and historic
sampling seasons. Results in uMhos/cm.**

Station	Year	Minimum	Maximum	Mean
METALIMNION				
	1987	38.8	39.2	38.9
	1988	36.7	39.4	37.6
	1989	36.9	41.1	38.1
	1990	34.0	37.8	36.3
	1991	34.9	39.9	37.4
	1992	38.1	41.8	40.0
	1993	39.7	42.8	41.3
	1994	39.0	44.5	41.3
	1995	39.1	42.8	40.6
	1996	35.3	40.5	37.6
	1997	33.5	37.6	35.8
	1998	34.2	36.9	35.7
	1999	41.2	43.7	42.7
	2000	38.8	42.9	40.9
NORTH SIDE CHANNEL				
	1988	75.9	75.9	75.9
OUTLET				
	1987	42.3	45.5	43.8
	1988	38.1	40.0	39.1
	1989	38.9	42.6	41.2
	1990	37.4	45.9	41.0
	1991	39.9	47.7	43.0
	1992	41.2	47.0	44.7

Table 6.

HIGHLAND LAKE
ANDOVER

**Specific conductance results from current and historic
sampling seasons. Results in uMhos/cm.**

Station	Year	Minimum	Maximum	Mean
	1993	41.9	44.7	43.3
	1994	41.3	46.7	44.3
	1995	41.1	44.7	43.4
	1996	37.1	41.4	39.5
	1997	36.8	41.6	39.0
	1998	40.2	43.1	41.2
	1999	45.8	46.3	45.9
	2000	42.4	46.0	44.6
SW RT. 11 BROOK				
	1989	61.4	61.4	61.4
	1990	38.8	73.3	53.7
	1991	60.5	100.7	80.8
	1992	62.8	69.8	66.3
TILTON BK				
	1987	26.5	31.5	29.4
	1988	22.5	32.0	27.6
	1989	23.0	30.7	27.1
	1990	22.3	32.1	26.6
	1991	26.9	37.3	33.5
	1992	25.3	34.2	30.6
	1993	28.9	39.1	35.2
	1994	25.0	43.0	31.5
	1995	22.8	41.7	33.6
	1996	22.8	35.0	28.6
	1997	25.4	33.5	28.7

Table 6.**HIGHLAND LAKE****ANDOVER**

**Specific conductance results from current and historic
sampling seasons. Results in uMhos/cm.**

Station	Year	Minimum	Maximum	Mean
	1998	25.8	29.4	27.0
	1999	30.6	34.9	32.9
	2000	25.3	42.5	30.9
WEST INLET				
	1987	52.6	77.6	62.0
	1988	39.7	46.2	42.8
	1989	40.3	55.5	48.1
	1990	55.8	55.8	55.8
	1991	55.3	55.3	55.3
	1992	51.9	53.8	52.8
	1993	63.9	76.3	70.1
	1994	44.9	80.5	59.1
	1995	39.6	39.6	39.6
	1996	43.8	52.9	48.3
	1997	47.4	63.2	55.3
	1998	49.7	59.0	54.3
	1999	111.4	111.4	111.4
	2000	56.0	70.7	62.3

Table 8.

HIGHLAND LAKE
ANDOVER

**Summary historical and current sampling season Total
Phosphorus data. Results in ug/L.**

Station	Year	Minimum	Maximum	Mean
CANAL SITE				
	1994	8	8	8
EAST SIDE CHANNEL				
	1988	6	6	6
EPILIMNION				
	1987	10	19	13
	1988	1	10	4
	1989	8	14	9
	1990	3	11	6
	1991	4	14	7
	1992	4	11	6
	1993	5	18	9
	1994	6	15	9
	1995	5	20	10
	1996	5	11	8
	1997	6	9	7
	1998	4	7	5
	1999	5	8	6
	2000	< 5	7	5
HYPOLIMNION				
	1987	< 10	21	16
	1988	< 1	15	8
	1989	5	16	11
	1990	6	15	9

Table 8.

HIGHLAND LAKE
ANDOVER

**Summary historical and current sampling season Total
Phosphorus data. Results in ug/L.**

Station	Year	Minimum	Maximum	Mean
	1991	7	22	14
	1992	8	15	10
	1993	10	20	14
	1994	5	18	12
	1995	7	14	10
	1996	8	13	10
	1997	9	12	10
	1998	3	11	8
	1999	10	17	12
	2000	< 5	13	9
LOWER MAPLE ST BK				
	1987	10	14	12
	1988	< 1	16	6
	1989	5	7	6
	1990	5	35	17
	1991	11	24	16
	1992	2	49	13
	1993	22	22	22
	1994	3	28	14
	1995	17	17	17
	1996	8	11	9
	1997	10	237	123
	1998	3	21	10
	1999	15	15	15
	2000	< 5	16	8

Table 8.

HIGHLAND LAKE
ANDOVER

**Summary historical and current sampling season Total
Phosphorus data. Results in ug/L.**

Station	Year	Minimum	Maximum	Mean
METALIMNION				
	1987	19	40	31
	1988	< 1	18	10
	1989	6	14	8
	1990	4	23	11
	1991	5	13	9
	1992	5	13	8
	1993	5	16	9
	1994	5	15	10
	1995	6	21	11
	1996	6	13	10
	1997	6	10	8
	1998	6	12	9
	1999	7	12	9
	2000	6	11	7
NORTH SIDE CHANNEL				
	1988	39	39	39
OUTLET				
	1987	14	21	17
	1988	5	16	11
	1989	8	19	12
	1990	5	57	21
	1991	12	21	16
	1992	11	65	25

Table 8.

HIGHLAND LAKE
ANDOVER

**Summary historical and current sampling season Total
Phosphorus data. Results in ug/L.**

Station	Year	Minimum	Maximum	Mean
	1993	12	38	22
	1994	5	25	14
	1995	11	45	28
	1996	8	18	12
	1997	10	24	17
	1998	5	14	10
	1999	9	16	11
	2000	6	11	8
SW RT. 11 BROOK				
	1989	51	51	51
	1990	13	43	22
	1991	45	102	71
	1992	19	21	20
TILTON BK				
	1987	13	29	19
	1988	< 1	11	6
	1989	3	10	6
	1990	1	35	10
	1991	6	24	11
	1992	1	8	5
	1993	7	52	19
	1994	3	31	17
	1995	11	40	25
	1996	8	18	12
	1997	12	14	12

Table 8.

HIGHLAND LAKE
ANDOVER

**Summary historical and current sampling season Total
Phosphorus data. Results in ug/L.**

Station	Year	Minimum	Maximum	Mean
	1998	3	19	11
	1999	11	24	16
	2000	< 5	17	9
WEST INLET				
	1987	27	57	46
	1988	11	24	16
	1989	23	38	29
	1990	11	11	11
	1991	22	22	22
	1992	21	24	22
	1993	25	47	36
	1994	18	22	20
	1995	23	23	23
	1996	23	26	24
	1997	26	54	40
	1998	32	57	44
	1999	202	202	202
	2000	18	27	22

Table 9.
HIGHLAND LAKE
ANDOVER

Current year dissolved oxygen and temperature data.

Depth (meters)	Temperature (celsius)	Dissolved Oxygen (mg/L)	Saturation (%)
June 22, 2000			
0.1	21.5	8.4	95.1
1.0	20.8	8.5	94.9
2.0	20.6	8.6	95.5
3.0	18.1	8.8	93.7
4.0	16.3	8.3	84.9
5.0	13.8	7.3	70.5
6.0	11.1	5.5	49.7
7.0	10.6	5.0	44.7
8.0	9.8	5.1	45.0
9.0	9.3	5.3	46.4
10.0	8.8	5.0	43.1
11.0	8.3	3.1	26.7
12.0	8.3	3.1	26.7
13.0	8.3	3.0	25.5

Table 10.

HIGHLAND LAKE
ANDOVER

Historic Hypolimnetic dissolved oxygen and temperature data.

Date	Depth (meters)	Temperature (celsius)	Dissolved Oxygen (mg/L)	Saturation (%)
August 11, 1987	14.0	7.0	0.3	2.0
May 27, 1988	13.0	7.4	6.4	55.0
May 25, 1989	13.5	7.0	10.6	86.0
June 21, 1989	13.0	8.0	3.3	28.0
May 23, 1990	11.0	7.1	8.2	67.5
July 23, 1991	13.0	7.5	0.2	1.7
May 21, 1992	14.0	7.0	6.3	51.7
June 15, 1993	13.5	6.2	3.2	26.0
June 15, 1994	13.0	9.0	2.1	18.0
July 22, 1994	12.0	9.8	0.4	3.0
May 18, 1995	14.0	9.0	7.0	61.0
June 11, 1996	14.0	7.0	2.3	19.0
June 11, 1997	14.0	9.5	3.7	31.0
June 11, 1998	14.0	7.2	2.3	19.0
June 14, 1999	14.0	9.0	2.2	18.7
June 22, 2000	13.0	8.3	3.0	25.5

Table 11.

HIGHLAND LAKE
ANDOVER

Summary of current year and historic turbidity sampling.
Results in NTU's.

Station	Year	Minimum	Maximum	Mean
EPILIMNION				
	1997	0.3	0.4	0.3
	1998	0.3	0.4	0.4
	1999	0.3	0.7	0.5
	2000	0.2	0.8	0.5
HYPOLIMNION				
	1997	0.6	2.0	1.1
	1998	0.5	3.0	1.5
	1999	1.2	3.7	2.3
	2000	0.8	8.7	3.1
LOWER MAPLE ST BK				
	1997	0.4	1.5	0.9
	1998	0.2	0.8	0.4
	1999	1.3	1.3	1.3
	2000	0.2	1.4	0.7
METALIMNION				
	1997	0.3	0.6	0.4
	1998	0.6	0.7	0.6
	1999	0.6	0.9	0.7
	2000	0.6	1.0	0.7
OUTLET				
	1997	0.6	2.7	1.5
	1998	0.6	1.3	0.9
	1999	1.1	1.8	1.5
	2000	0.6	1.4	1.0

Table 11.

**HIGHLAND LAKE
ANDOVER**

**Summary of current year and historic turbidity sampling.
Results in NTU's.**

Station	Year	Minimum	Maximum	Mean
TILTON BK				
	1997	0.7	1.3	0.9
	1998	0.8	1.5	1.1
	1999	1.3	1.6	1.4
	2000	0.3	2.3	0.9
WEST INLET				
	1997	0.8	1.2	1.0
	1998	0.8	1.7	1.3
	1999	8.6	8.6	8.6
	2000	1.0	1.7	1.3